

# MNNR

MORBIDITY AND MORTALITY WEEKLY REPORT

- 625 Minors' Access to Cigarette Vending Machines — Texas
- 627 Interstate Measles Transmission from a Ski Resort — Colorado, 1994
- 635 Arenavirus Infection Connecticut, 1994
- 636 Notice to Readers
- 637 Monthly Immunization Table

#### **Current Trends**

#### Minors' Access to Cigarette Vending Machines — Texas

The sale of tobacco products to persons aged <18 years has been prohibited by law in Texas since September 1989\*. This law requires cigarette vending machine owners to post signs on their machines stating the illegality of tobacco product sales to persons aged <18 years and that merchants convicted for selling tobacco products to underaged persons be fined a maximum of \$500. In August 1991, Arlington, Texas, enacted legislation requiring installation of electronic locking devices on all cigarette vending machines. These devices render the vending machine inoperable until the store owner electronically unlocks the machine on customer request. To assess minors' access to cigarettes through vending machines, in October 1993 the Texas Department of Health conducted a study in Arlington and five neighboring communities. This report summarizes the study findings.

In September 1993, the health department obtained a list of business establishments with cigarette vending machines owned by the largest cigarette vending company in the Arlington area. A total of 116 establishments were identified in the study area; 59 (51%) machines were in establishments considered easily accessible to minors (i.e., restaurants, gas stations, motel lobbies, food stores, and recreational facilities). Data were collected for 42 of the 59 sites.

Four investigative teams consisted of one adult paired with one minor (aged 15–17 years). One purchase attempt was made at each of the 42 establishments. During each purchase attempt, the adult entered the establishment first and asked for street directions. The adult then observed while the minor entered and attempted to purchase cigarettes from the vending machine. Minors were instructed to answer, if asked, that the cigarettes were for themselves.

While attempting to purchase cigarettes from vending machines, no minors were challenged by business owners. Of the 42 attempts, 41 were successful. Of the 41 sites where purchase attempts were successful, 24 (59%) were located within ½ mile of a school. Most (35 [83%] of 42) purchase attempts occurred in restaurants; however, cigarettes were bought at every type of establishment where purchases were at-

<sup>\*</sup>Texas Health and Safety Code, Title 2, Sections 161.081-161.082.

Cigarette Machines - Continued

tempted. Warning signs prohibiting cigarettes sales to minors were posted on vending machines in 32 (76%) establishments.

Of the 16 vending machines located in business establisments in the city of Arlington, one was equipped with an electronic locking device. The single unsuccessful purchase attempt occurred at this electronically locked machine.

Reported by: JM Gomez, Arlington Police Dept; GJ Flores, SR Tobias, Office of Smoking and Health, CR Allen, MD, Public Health Region 2, PP Huang, MD, Bur of Chronic Disease Prevention and Control, DM Simpson, MD, State Epidemiologist, Texas Dept of Health. Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion; Div of Field Epidemiology, Epidemiology Program Office, CDC.

Editorial Note: The findings in this report indicate that, despite laws prohibiting cigarette sales to persons aged <18 years, minors readily purchased cigarettes from vending machines in Arlington and five neighboring communities. Although the only failed purchase attempt in this study resulted from a vending machine equipped with a remote-controlled locking device, compliance with legislation requiring these devices has been minimal (1). The finding that only one of 16 vending machines in Arlington was equipped with the device is similar to findings of studies about locking device usage in other areas (1).

The findings in this report are subject to at least two limitations. First, data in this report were obtained for only one vending machine company in the Arlington area because the Texas Department of the Treasury does not require vending machine companies to specify the locations of their machines. Second, because of time constraints during the study, data were not collected for 17 establishments considered easily accessible to minors; however, sites included in the analysis probably do not differ from sites that were not included.

Approximately 82% of adult smokers report that they first tried a cigarette by age 18 years, and 53% were daily smokers by that age (2). The initiation rate for smoking increases rapidly after age 11 years (3); in Texas, a 1989 survey of 4400 high school students found that 55% of 12-year-olds had already tried cigarette smoking (4). Because vending machine sales are not monitored actively by adults, cigarette vending machines can be an important source for younger adolescents (i.e., aged 12–15 years), who are more likely than older adolescents (i.e., aged 16–18 years) to be refused an over-the-counter cigarette sale (5). Studies indicate that younger adolescent smokers are more likely to buy cigarettes from vending machines than older adolescent smokers (6.7).

Unregulated cigarette vending machines may facilitate initiation of smoking among younger adolescents; therefore, more effective regulation of these sales may be an important preventive measure. Prevention of adolescent smoking may be enhanced by the recently enacted Synar Amendment to the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) Reorganization Act.<sup>†</sup> The Synar Amendment requires that states demonstrate effective prohibition of the sale of tobacco products (including cigarettes from vending machines) to persons aged <18 years as a condition of receiving full ADAMHA block grants. As a result of this study, the Arlington City Council enacted legislation prohibiting cigarette vending machines in all business establishments that admit persons aged <18 years.

<sup>†</sup>Public Law 102-321, §1926.

#### Cigarette Machines — Continued

#### References

 Forster JL, Hourigan M, Kelder S. Locking devices on cigarette vending machines: evaluation of a city ordinance. Am J Public Health 1992;82:1217–9.

2. US Department of Health and Human Services. Preventing tobacco use among young people: a report of the Surgeon General. Atlanta: US Department of Health and Human Services, Public Health Service, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1994.

Kandel DB, Logan JA. Patterns of drug use from adolescence to young adulthood: I. Periods
of risk for initiation, continued use, and discontinuation. Am J Public Health 1984;74:660–6.

4. Texas Department of Health. University of Texas Health Science Center: Texas Tobacco Survey, 1989—a survey of 7th, 8th, 10th, and 12th graders in public schools in Texas. Austin, Texas: Texas Department of Health, 1989.

 Forster JL, Hourigan M, McGoven P. Availability of cigarettes to underage youth in three communities. Prev Med 1992;21:320–8.

 Allen KF, Moss AJ, Giovino GA, Shopland DR, Pierce JP. Teenage tobacco use: data estimates from the teenage attitudes and practices survey—United States, 1989. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, NCHS, 1992. (Advance data no. 224).

 National Automatic Merchandising Association. Findings: study of teenage cigarette smoking and purchase behavior. Chicago: National Automatic Merchandising Association, 1989.

#### **Epidemiologic Notes and Reports**

## Interstate Measles Transmission from a Ski Resort — Colorado, 1994

During April 1–May 25, 1994, a chain of measles transmission began in Breckenridge, Colorado, and extended into nine additional states; a total of 247 measles cases were reported, representing 36% of all U.S. measles cases reported to the National Notifiable Diseases Surveillance System (excluding those reported from U.S. territories) through July 2 (week 26). The source of exposure was unknown but is believed to have been an out-of-state tourist who probably visited Breckenridge during March because 1) no measles cases had previously been reported in Colorado during 1994, and 2) the only common exposure appeared to have been at a ski resort visited by many out-of-state travelers. Persons associated with spread of measles from Breckenridge were predominately school- and college-aged. This report summarizes the investigation of this chain of interstate measles transmission.

A total of 15 measles cases with rash onset during April 4–21 occurred in Breckenridge. Persons with measles ranged in age from 16 years to 46 years (median: 27.6 years). All cases met the CDC measles clinical case definition (1); 12 were serologically confirmed. All 15 ill persons either lived in Summit County (Breckenridge) or three neighboring counties (Arapahoe, Chaffee, and Park) or worked in tourism-related services in or near Breckenridge. Twelve of the 15 ill persons are believed to have been exposed to the unidentified source, and three cases resulted from secondary transmission. Two cases occurred among high school students; no further transmission in schools was reported.

Interstate transmission of measles occurred through four out-of-state travelers and a Silver Thorn, Colorado, resident—all of whom had visited Breckenridge during

Measles Transmission - Continued

March 18–25. All five visitors are believed to have been exposed to the unidentified source. Two persons (a 46-year-old Texas resident [rash onset: April 16] and a 29-year-old Missouri resident [rash onset: April 4]) developed measles on return home but have not been linked to additional cases. The other three persons—an Illinois resident, a Maryland resident, and the Silver Thorn resident—became sources for further transmission.

Illinois. A 14-year-old unvaccinated female high school student returned home to Jersey County, Illinois; she developed a rash on April 4. The student was identified as the source of an outbreak involving 51 unvaccinated persons (age range: 1–24 years; median: 18 years; last rash onset: June 3) in her community—which was associated with a Christian Science college in the county. She also was identified as the source of an outbreak involving 156 persons (age range: 4–25 years; median: 15 years; rash onsets: April 17–May 15) at the Christian Science boarding high school she attended in St. Louis County, Missouri. After several unvaccinated persons from other states visited the school during the outbreak, six additional cases occurred. Five persons developed measles on return home (two persons to Maine and one each to California, New York, and Washington); the California patient was the source of exposure for a sibling. No further transmission associated with these six cases is known.

Maryland. A 24-year-old woman returned home to Baltimore County, Maryland; she developed a rash on April 4. The woman was the source of exposure for her 56-year-old father, who had rash onset on April 21.

Michigan. A 25-year-old Silver Thorn man visited his family in Wayne County, Michigan; he developed rash on April 17. The man was identified as the source of an outbreak involving 12 persons (age range: 9 months-37 years; median: 24 years; rash onsets: April 17–May 18) who were exposed at a wedding and a restaurant. One additional case (rash onset: April 16) was reported in a 12-year-old Chicago resident who had visited Wayne County. No further transmission associated with the Michigan or Chicago cases is known.

Reported by: GW Rutherford, III, MD, State Epidemiologist, California State Dept of Health Svcs. RE Hoffman, MD, State Epidemiologist, Colorado Dept of Health. BJ Francis, MD, State Epidemiologist, Illinois Dept of Public Health. KF Gensheimer, MD, State Epidemiologist, Bur of Health, Maine Dept of Human Svcs. E Israel, MD, State Epidemiologist, Maryland State Dept of Health and Mental Hygiene. KR Wilcox, Jr, MD, State Epidemiologist, Michigan Dept of Public Health. HD Donnell, Jr, MD, State Epidemiologist, Missouri Dept of Health. D Morse, MD, State Epidemiologist, New York State Dept of Health. DM Simpson, MD, State Epidemiologist, Texas Dept of Health. W Lasota, Immunization Program, Washington Dept of Health. National Immunization Program, Office of the Director; Epidemiology Program Office, CDC.

Editorial Note: The sustained interstate measles outbreak described in this report demonstrates the ability of measles virus to spread rapidly and widely among a highly mobile population. The dates of rash onset for the five Breckenridge visitors suggest that they had been exposed to measles during the same period the Breckenridge cases were exposed; therefore, exposure to the common, unidentified source—not the Breckenridge cases—probably led to this widespread interstate outbreak. Direct contact of the five visitors with the unidentified source resulted in primary transmission of measles in five other states (222 reported cases), and further contact resulted in secondary transmission in four additional states (six reported cases) before the chain of transmission ended.

#### Measles Transmission — Continued

Factors that may have contributed to this interstate measles outbreak include 1) the timing of the initial exposure during school spring break; 2) exposure of an unvaccinated student who subsequently returned home to a community and school with many susceptible, unvaccinated persons; and 3) special events at the Missouri boarding school that drew susceptible, unvaccinated visitors from other states.

Although measles spread from Colorado to nine other states, transmission in six states stopped with the index case or after one additional case. In some of these states, spread may have been limited because the sources were adults whose routine activities may not have involved close contact with groups containing susceptible persons. Only two outbreaks (Illinois/Missouri and Michigan) resulted in substantial numbers of reported cases, and both were associated with contact with large groups (e.g., high school and college populations, wedding guests, and restaurant patrons). The extended outbreak in Illinois and Missouri has been the largest measles outbreak in the United States (excluding territories) in 1994 (2).

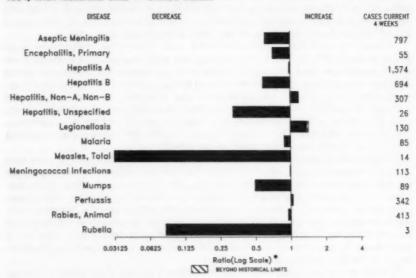
The primary strategy to prevent measles outbreaks is achieving and sustaining measles vaccination coverage levels of at least 90% for a single dose among all age groups. Efforts are under way to increase measles vaccination coverage among preschool children and implement a recommendation that all school-aged and college-aged persons receive two doses of measles-mumps-rubella vaccine. However, additional strategies may be needed to ensure complete vaccination of adults and to prevent outbreaks in settings where large groups of adults gather (e.g., resorts and restaurants). Large groups that do not routinely accept vaccination will remain potential problems for measles-control programs.

To achieve the Childhood Immunization Initiative's goal of eliminating indigenous measles in the United States by 1996 (3), continued efforts to assure rapid detection of measles cases and implementation of control measures are necessary. To define disease transmission patterns more completely, state and local health departments should rapidly investigate and report all suspected measles cases, obtain laboratory confirmation, determine the vaccination status of each suspected case, and determine the source or chain of disease transmission. Identification of measles cases by transmission category (i.e., international importation, linked to an importation, or indigenously acquired) also will be necessary to track progress toward achieving the 1996 elimination goal.

#### References

- 1. CDC. Case definitions for public health surveillance. MMWR 1990;39(no. RR-13):23.
- CDC. Outbreak of measles among Christian Science students—Missouri and Illinois, 1994.
   MMWR 1994;43:463–5.
- CDC. Reported vaccine-preventable diseases—United States, 1993, and the Childhood Immunization Initiative. MMWR 1994;43:57–60.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending August 27, 1994, with historical data - United States



<sup>\*</sup>Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending August 27, 1994 (34th Week)

	Cum. 1994		Cum. 1994
AIDS*	45,801	Messles: imported	158
Anthrax		indigenous	651
Botulism: Foodborne	42	Plague	12
infant	48	Poliomyelitis, Paralytic <sup>§</sup>	1
Other	48 6 59 10 2	Paittacosis	25
Brucellosis	59	Rabies, human	1
Cholera	10	Syphilis, primary & secondary	14,031
Congenital rubella syndrome	2	Syphilis, congenital, age < 1 year	532
Diphtheria		Tetanus	23 125
Encephalitis, post-infectious	79	Toxic shock syndrome	125
Gonorrhea	245.524	Trichinosis	27
Haemophilus Influenzae (invasive disease)?	772	Tuberculosis	13,845
Hansen Disease	76	Tularemia	57
Laptospirosis	76 18	Typhoid fever	289
Lyme Disease	6.236	Typhus fever, tickborne (RMSF)	259

<sup>\*</sup>Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update July 28, 1994.

101 735 cases of known age, 206 (28%) were reported among children less than 5 years of age.

The remaining 5 suspected cases with onset in 1994 have not yet been confirmed. In 1993, 3 of 10 suspected cases were confirmed. Two of the confirmed cases of 1993 were vaccine-associated and one was classified as imported.

Total reported to the Division of Sacusally Transmitted Diseases and HIV Prevention, National Center for Prevention Services,

through first quarter 1994.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending August 27, 1994, and August 28, 1993 (34th Week)

Reporting Area		Assptic	Encephalitis				Hepatitis (Viral), by type				Lastonia	
	AIDS*	Menin- gitis Cum. 1994	Primary	Post-in- fectious Cum. 1994	Gonorrhea		A		NA,NB	Unspeci- fied	Legionel- losis	Lyme Disease
	Cum. 1994		Cum. 1994		Cum. Cum. 1994 1993	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	
UNITED STATES	45,801	4,583	382	79	245,524	255,746	14,066	7,494	2,802	278	1,033	6,236
NEW ENGLAND	1,811	150	12	4	5,299	4,821	200	239	94	16	26	1,861
Maine	70	18	2		54	53	21	11			3	14
N.H.	37	22		2	72	39	12	16	8			15
Vt. Mass.	934	15 51	7	1	20	17	5	480	-	**		8
Mass. R.I.	146	44	2	1	1,989	1,923	82 17	153	66 20	14	16	148 286
Conn.	603	-			2,857	2,519	63	53	20	*	,	1,390
MID. ATLANTIC	13,256	467	36	14	25,935	27,774	1,085	931	314	9	164	3.514
Upstate N.Y.	1,145	197	18	2	6,327	5.682	382	256	155	5	40	2,227
N.Y. City	8,180	96	6	4	8,503	7,880	411	206	1		2	9
N.J.	2,786				3,009	3,041	191	246	130		29	730
Pa.	1,145	174	12	8	8,096	11,171	101	223	28	4	93	548
E.N. CENTRAL	3,645	764	95	17	48.367	53,184	1,328	749	206	7	328	62
Ohio	649	192	25	2	14,488	14,896	523	117	17		152	43
Ind.	389	116	7	1	5,635	5,328	250	133	9		91	10
III.	1,759	174	32	5	12,524	17,838	272	140	42	3	16	4
Mich.	650	275	27	9	11,428	10,874	176	254	135	4	53	
Wis.	198	7	4		4,292	4,228	107	105	3		16	
W.N. CENTRAL	981	241	19	5	13,499	14,030	678	438	111	9	92	118
Minn.	256	18	2		2,085	1,533	160	43	17	1	1	66
lowa	51	67	7		987	1,082	33	19	7	7	26	11
Mo. N. Dak.	431	93	2	4	7,993	8,181	292	334	67	1	42	28
S. Dak.	10		2		114	173	24				-	
Nebr.	57	13	4	1		484	88	19			14	
Kans.	158	48	2		2,302	2,542	78	23	12		5	
S. ATLANTIC	10.074	942	74	24	67,630	66,763	925	1,594	439	27	235	511
Del.	163	24	1		853	919	13	4	1		22	27
Md.	1,284	135	15	2	11,432	10,324	115	220	21	6	60	207
D.C.	879	29	*	1	4,789	2,918	17	40			8	4
Va.	725	154	17	6	8,542	7,985	109	84	18	4	5	100
W. Va.	27	17	6		503	404	10	25		*	1	13
N.C.	719	154	34	1	17,563	16,774	90	187	45		16	51
S.C. Ga.	1,186	23 42	1		8,462	7,042 4,660	30 23	506 506		-	9 82	8
Fla.	4,426	364		14	15,486	15,737	518			17	32	1:
E.S. CENTRAL		318	-	2	29,587	29,135	332			2	43	2
	1,239	103	25 10	1	3,248	3,100	99			2	6	1
Ky. Tenn.	390	55	10	,	8,755	9,039	130			î	22	1
Ala.	366	124	5	1	10,589	10,345	64			i	11	
Miss.	276	36			6,995	6,651	39				4	
W.S. CENTRAL	4,667	514	37	2	30,680	28,551	2,028	896	352	50	33	8
Ark.	160	37	31	-	4,494	4,272				1	7	
La.	740	25	6		8,085	7,711	99			1	10	
Okta.	183				2,489	2,942	190	217	203	1	11	4
Tex.	3,584	452	31	2	15,612	13,626	1,628	548	37	47	5	3
MOUNTAIN	1,405	180	6	3	5,376	7,504	2,703	420	299	37	62	1
Mont.	17	3			66	53	17	20	5		14	
Idaho	30	3			58	123				1	1	
Wyo.	13	2	1	2	52	60				-	3	
Colo.	529	76	1		1,821 636	2,503 605				12	14	
N. Mex. Ariz.	106 380	44		-	1,964	2,661				9	3	
Utah	93	23		1	167	299				1	7	
Nev.	237	20	4		612					5	17	
	8,723	1,007	78	8	19,151	24,004		1,483		121	50	5
PACIFIC Wash.	588	1,007	78		1,770	2,513	225			121	5	9
Oreg.	386				570	821				1	9	
Calif.	7,613	906	76	7	15,807	19,940				116	42	5
Alaska	29	16	2		558	371	155	1				
Hawaii	107	85		1	446				1 5	3	3	
Guern	1	9			81	69	17	, ;	2 -	4	2	
P.R.	1,424			3	301					10	-	
V.I.	34				17	76	3		1 -			
Amer. Samos		-			20					*	-	
C.N.M.I.			*		31	64	1 4	1				

N: Not notifiable

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of Northern Mariana Islands \*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; lest update July 26, 1994.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending August 27, 1994, and August 28, 1993 (34th Week)

			Measle	(Flube	ola)		Menin-								
Reporting Area	Maluria	Indige	enous	Impo	orted*	Total	gococcal	Mu	mps		Pertussi	•		Rubella	
	Cum. 1994	1994	Cum. 1994	1994	Cum. 1994	Cum. 1993	Cum. 1994	1994	Cum. 1994	1994	Cum. 1994	Cum. 1993	1994	Cum. 1994	Cum. 1993
UNITED STATES	628	1	651	1	158	248	1,830	18	924	75	2,167	3,171		202	157
NEW ENGLAND		1	15		12	60	96		14	7	215	457	*	125	1
Maine	3	*	1		4	1	18	-	3	4	3 48	112		-	1
N.H. Vt.	2		2		1	31	2	-	-	4	28	61	-		-
Mass.	25		3		4	17	38			2	112	226		122	-
R.I. Conn.	5 13	i	4	*	3	9	31		8	-	5 19	42		2	
MID. ATLANTIC	116		180		22	19	179	2	78	21	384	503		9	55
Upstate N.Y.	34		25		3	4	61	-	20	20	162	138	-	6	13
N.Y. City	41		14	*	2	7	11		8		73	49		1	22
N.J. Pa.	21		137		14	8	42 65	2	6	1	140	53 265		2	15
			-	4	-		-	1	146	1				11	7
E.N. CENTRAL	62		59 15	1	41	25 9	286 78		42	1	287 106	805 197		11	1
Ind.	11		*	*	1	-	49		6		47	57		-	2
III.	23	-	17	11	39	9	93		61	*	59	282		3	1
Mich. Wis.	18		24	-	1	5 2	40 26	1	33		29 46	33 236	-	8	2
W.N. CENTRAL	31		116	-	42	3		2	44	15	114	231		2	1
Minn.	10		110		-		11	1	5	12	51	105		-	
lowa	4		6		1		16	-	11	-	6	13	-	-	-
Mo. N. Dak.	11	*	108	*	40	1	63	1	23	-	29 5	80	-	2	1
S. Dak.							7	-		2	6	7			
Nebr.	3	*	1	*	1		9	*	2		7	. 8			-
Kans.	2		1			2				1	10	14			
S. ATLANTIC Del.	120		45	*	4	25	310	1	139	6	216	292	-	9	6
Md.	52		1		2	4		1	39		59	91	-	-	2
D.C.	8				-		. 3				5	5			*
Va.	18	*	36		1	1	51	-	32		27	38		*	
W. Va. N.C.	7		2		1		42		36		58				
S.C.	3				-		17		6		12	8			
Ga. Fla.	13 16		2			20	63		16		18	28		9	4
		•									105	-			-
E.S. CENTRAL Ky.	23	0	28	-		1	113	-	16		53				-
Tenn.	8		28	-			- 25	-	7		18	54			
Als.	7				-	1	55	-	3		26				-
Miss.	1							-			-			**	-
W.S. CENTRAL	33		9		7		230	3	183		104			12	17
La.	5				1	1		1	21		8				1
Okla.	3				-		- 24	-	23		22			4	1
Tex.	22		5		5			2	138		55			8	15
MOUNTAIN Mont.	22	-	148		17		122	1	108	7	292			5	9
Idaho	2						. 15	1			42				1
Wyo.	1	-			-		- 5	*						-	
Colo. N. Mex.	10		10		3		23	N			108			i	2
Ariz.	1	-		1 -	1		- 40		7	3	104				2
Utah	4		13	1 -	2		- 15	-	1		13			3	3
Nev.	1	*			11		1 5	-	10		2			1	1
PACIFIC	170		5		13	10	8 366 - 24	6			460			20	61
Wash. Oreg.	8			. 0			3 64	N			33			2	
Calif.	141		4		9	8	3 270	2	17	7 14	378	35	7 -	22	35
Alaska	1	*		5 -			1 2	:		2 -	10		1 .	1	25
Hawaii	14		-		4			4					*	4	
Guam P.R.	2 2		21			. 32		U		4 U		2	1 .	1	
V.L.												-			
Amer. Samoa	1				,					1 :	1		2 :		
C.N.M.I.	1	U	2	6 U		•	1 -	U		2 U			1 U		

<sup>\*</sup>For messles only, imported cases include both out-of-state and international importations.

N: Not notifiable U: Unavailable † International 5 Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending August 27, 1994, and August 28, 1993 (34th Week)

Reporting Area	Syp (Primary &	hilis Secondary)	Toxic- Shock Syndrome	Tubero	ulosis	Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994
UNITED STATES	14,031	17,229	125	13,845	14,554	57	269	259	3,978
NEW ENGLAND	152	236	3	313	305		20	10	1,216
Maine	4	4		-	12	-	-		
N.H.	3	21		14	15	*			118
Vt. Mass.	64	101	1	3 166	163	*	16	-	99
R.I.	12	10	2	32	38		16	8	465
Conn.	69	99		98	74		3	2	529
MID. ATLANTIC	854	1,540	21	2,757	3,087	1	80	8	388
Upstate N.Y.	107	138	11	185	466	1	7	2	79
N.Y. City	371	796	*	1,725	1,860		58	1	
N.J.	120	202	.5	501	307		15	1	193
Pa.	256	404	10	346	454	-	-	4	116
E.N. CENTRAL	1,900	2,872	25	1,360	1,464	7	46	37	39
Ohio	788	770	9	202	210	1	5	24	2
Ind.	163 545	237	2 5	115	143	2	4	5	11
III. Mich.	180	1,110	9	710 292	764 286	2	26	6 2	9
Wis.	224	343		41	61	1	7	-	7
W.N. CENTRAL	790	1,131	20	358	321	21	1	22	144
Minn.	32	44	20	81	38	1		22	13
lowa	40	51	7	35	38		-	1	62
Mo.	684	925	5	155	171	14	1	9	12
N. Dak.		4	1	6	5	-			8
S. Dak.		2		17	11	1		10	22
Nebr.	34	10 95	2 4	18 46	16 42	1 4		1	27
Kens.									
S. ATLANTIC	4,076	4,533	6	2,457	2,954	1	36	114	1,357
Del. Md.	13 167	83 256	-	213	30 255		1 6	10	37 373
D.C.	157	236		81	113		1		2
Va.	516	431	1	214	299		6	12	262
W. Va.	8	8		58	53			2	55
N.C.	1,141	1,282	1	293	335	~		46	108
S.C.	519	664	*	242	271			9	126
Ga. Fla.	1,005 550	757 816	4	569 787	1,090	1	20	32	264 130
E.S. CENTRAL	2,486 135	2,575 216	3	814 214	1,057 249		2	21	124
Ky. Tenn.	656	742	2	207	319		î	13	34
Ala.	447	555	-	271	318			2	80
Miss.	1,248	1,062		122	171	*		2	
W.S. CENTRAL	3,102	3,312	1	1.921	1,509	15	10	35	455
Ark.	346	380		200	116	13	*	6	20
La.	1,176	1,657		94	116		3		47
Okla.	96	212	1	186	97	2	2	25	24
Tex.	1,484	1,063		1,441	1,180		5	4	364
MOUNTAIN	176	166	6	311	355	10	9	12	88
Mont.	3	1	i	9	13	3		4	13
ldaho Wyo.	1	7	1	5	2	*		2	2 15
Colo.	94	45	3	21	56	1	3	4	8
N. Mex.	18	24		43	35	2	1	-	3
Ariz.	31	71	*	149	148		1	1	31
Utah	6	4	2	29	21	2	2	:	10
Nev.	23	14	-	44	71	2	2	1	6
PACIFIC	495	864	40	3,554	3,502	2	65		167
Wesh.	38	37	*	174	162		3	*	
Oreg.	21	33 785	37	3.077	3,119	2	3 55		131
Calif.	430	785	3/	3,077	3,119		25		131
Alaska Havvaii	2	3	3	178	179	-	4		23
Guern	4	3		58	42		1		
P.R.	187	356		86	132				51
V.I.	22	32	-	-	2				
Amer. Samoa	1			3	3	*	1	*	
C.N.M.I.	2	3		22	20	-	1		

U: Unavailable

## TABLE III. Deaths in 121 U.S. cities,\* week ending August 27, 1994 (34th Week)

		ill Cau	ses, By	Age (Y	ears)		PBI <sup>1</sup>	PAC	All Causes, By Age (Years)						
Reporting Area	All Ages 265 45-64 25-44 1-24 <1		Total	Reporting Area	All Ages ≥85		45-64	25-44	1-24	<1	P&i Tota				
NEW ENGLAND	490	334	83	47	14	12	46	S. ATLANTIC	1,134	675	230	161	41	27	49
Beston, Mass.	139	79	25	19	8	8	11	Atlanta, Ga.	154	91	36	25	2		3
Bridgeport, Conn.	41	36	2	2	1		7	Baltimore, Md.	209	116	41	36	6	10	15
Cambridge, Mass.	23	18	3	2	-		2	Charlotte, N.C.	113	71	23	11	3	5	7
Fail River, Mass. Hartford, Conn.	32 41	26 26	6 7	7	1	*	1	Jacksonville, Fla. Miami, Fla.	105	67 33	24 18	11	3 2	1	4
Lowell, Mass.	24	16	6	1		1	6	Norfolk, Va.	46	33	18	4	4	1	
Lynn, Mass.	11	9	9	2	-	1	11	Richmond, Va.	U	U	Ü	ů	ů	Ü	i
New Bedford, Mass		12	2	2	1		2	Savannah, Ga.	52	25	15	8	2	2	
New Haven, Conn.	47	24	12	7	2	2	1	St. Petersburg, Fla.	58	51	5		2	-	1
Providence, R.I.	Ü	Ü	Ü	Ú	ű	û	Ü	Tampa, Fla.	157	113	25	14	2	3	10
Somerville, Mass.	1			1				Washington, D.C.	168	71	37	40	15	5	- 1
Springfield, Mass.	29	19	8	1		1	3	Wilmington, Del.	6	5	1	-		-	
Waterbury, Conn.	30	29	1				6	-		-		-	-	0.0	
Worcester, Manu.	55	40	71	3	1		6	E.S. CENTRAL	779	503	168	63	22	23	53
MID. ATLANTIC	2,363	1,516	463	276	69	36	88	Birmingham, Ala. Chattanooga, Tenn.	127	77 64	26	12	6	6	1
	53	35	463					Chattanooga, lenn.	77	56	16		1		- 1
Albany, N.Y. Allentown, Pa.	20	15	13	3 2	2	-	1	Knoxville, Tenn. Lexington, Ky.	76	48	18	3	1	2	1
Buffalo, N.Y.	100	73		3	5	3	1	Memphis, Tenn.	205	122	49	18	9	7	1
Camden, N.J.	38	23		3	4	1	1	Mobile, Ala.	41	22	12	3	2		
Elizabeth, N.J.	19	13		3			1	Montgomery, Ala.	52	36	10	2	2	2 2 3	,
Erie, Pa.\$	39	33					3	Nashville, Tenn.	112	78		7	1	3	1
Jersey City, N.J.	38	23		5	1		-								
Jersey City, N.J. New York City, N.Y.	1,261	767		174	42	21	33	W.S. CENTRAL	1,416	852		169	52	50	8
Newark, N.J.	74	21	24	23	4	2	4	Austin, Tex.	52	26		10	1	5	-
Paterson, N.J.	31	27	2		1			Baton Rouge, La.	60	38	10	9	3		-
Philadelphia, Pa.	321	196	67	47	8	3	20	Corpus Christi, Tex.		30		4	1	3	
Pittsburgh, Pa.§	71	55		3	2	3	7	Dallas, Tex.	175	94		28	10	6	-
Reading, Pa.	23	18		1	-		2	El Paso, Tax.	69 91	46		5	2	4	1
Rochester, N.Y.	117	87		6	1	2	8	Ft. Worth, Tex.	378	210		9 51	10	10	
Schenectady, N.Y.	30	20		2				Houston, Tex. Little Rock, Ark.	62	33		51	5	10	3
Scranton, Pa.5	37	29		*		1		New Orleans, La.	104	56		17	6		
Syracuse, N.Y.	54					*	4	San Antonio, Tex.	200	143		18	7	2 2	1.
Trenton, N.J.	14	16		1				Shreveport, La.	68	40		8	4	4	
Utica, N.Y. Yonkers, N.Y.	25 U	22		Ü	ú	Ü	u u	Tulsa, Okla.	109	76		5	2	7	
	-							MOUNTAIN	822	550	135	87	26	24	4
E.N. CENTRAL	1,960				109	57		Albuquerque, N.M.	89	53		11	1	2	-
Akron, Ohio	67	50			2	3		Colo. Springs, Colo		33	5	7		1	
Canton, Ohio Chicago, III.	33 317	149			53	5	3	Denver, Colo.	100	86		17	5	3	-
Cincinnati, Ohio	124				3	2	5 7	Les Vegas, Nev.	152	96		9	7	6	
Cleveland, Ohio	128			8	4	2		Ogden, Utah	24	19	2	1	1	1	
Columbus, Ohio	137				7	5	10	Phoenix, Ariz.	186	125		18	7	9	1
Dayton, Ohio	101				3	1	11	Pueblo, Colo.	17	11	3	3			
Detroit, Mich.	289				6	11		Salt Lake City, Utah		62		11	3	1	
Evansville, Ind.	48					7		Tucson, Ariz.	118	86	19	10	2	1	
Fort Wayne, Ind.	52		9	4	3		5	PACIFIC	1,227	807	202	138	36	35	6
Gary, Ind.	21	1	8 6	3	2	2		Berkeley, Calif.	13	807		130	30	1	-
Grand Rapids, Mic	h. 54	31	8	4	3	1	7	Fresno, Calif.	61	40		4	2	5	
Indianapolis, Ind.	183				14		8	Glendale, Calif.	16	14		1			
Madison, Wis.	68	4	0 6	7	4	2	3	Honolulu, Hawaii	83	53		10	- 5	3	
Milwaukee, Wis.	102	7	13	5	1	4	9	Long Beach, Calif.	79	53		10	1	5	
Peoria, III.	38			3	1	2		Los Angeles, Calif.	334	214		37	10		
Rockford, III.	45				-	1		Pasadena, Calif.	30	27	3	1		4	
South Bend, Ind.	40					2	6	Portland, Oreg.	74	54	1 11	6	3		
Toledo, Ohio	83				1	2	1	Sacramento, Calif.	U		U	U	U	U	
Youngstown, Ohio	73	5	4 12	3	1	3	3	San Diego, Calif.	127	83	11	26	5	3	1
W.N. CENTRAL	623	43	8 100	44	22	12	2 31	San Francisco, Cali	if. U	-	U	U	U	U	
Des Moines, Iowa	· L				Ü			San Jose, Calif.	135	87		10	3	9	
Duluth, Minn.	17						. 1	Santa Cruz, Calif.	27	21	3	2	2		
Kansas City, Kans.	3				1		- 1	Seattle, Wash.	124			17		4	
Kansas City, Mo.	81		1 13	2	i		5	Spokane, Wash.	51	3		6	2	1	
Lincoln, Nebr.	36				2		3	Tacoma, Wash.	73	4	7 15	8	3		
Minneapolis, Minn				7	5		2 9	TOTAL	10.034	1 6 02	2,021	1 102	391	276	5
Omaha, Nebr.	7				3		4	TOTAL	10,834	0,33	2,021	1,103	391	2/6	5
St. Louis, Mo.	113				6		3 2								
St. Paul, Minn.	6				3		4								
Wichita, Kans.	6						1 2	1							

<sup>&</sup>quot;Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

Presumonia and influenze.

Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete accounts will be available in 4 to 6 weeks.

U: Unavailable.

#### **Emerging Infectious Diseases**

#### Arenavirus Infection — Connecticut, 1994

On August 20, 1994, the Connecticut Department of Public Health and Addiction Services received a report of a case of acute illness in a virologist suspected to be associated with Sabiá virus, a newly described arenavirus. This report presents pre-liminary findings from the case investigation.

On August 19, 1994, the virologist presented to the Tropical Medicine Clinic at Yale-New Haven Hospital with a 4-day history of fever, malaise, backache, stiff neck, and myalgias that he attributed to a recurrence of a *Plasmodium vivax* infection. On evaluation at the clinic, his temperature was 99.8 F (37.6 C) on antipyretics, and he had a normal physical examination. Laboratory evaluation included a negative malaria smear, a total white blood cell count (WBC) of 2600 cells/mm³ (normal: 4000–10,000 cells/mm³), a platelet count of 138,000 cells/mm³ (normal: 150,000–350,000 cells/mm³), 2+ proteinuria, and alanine aminotransferase (ALT) of 6356 U/L (upper limit normal: 35 U/L).

A history of a possible laboratory exposure to Sabiá virus was obtained, and the man was hospitalized for prompt treatment with intravenous ribavirin, an antiviral drug that is effective against other arenavirus infections such as Lassa fever (1).

On admission, the patient had a temperature of 103 F (39.4 C). Within 24 hours of hospitalization, his total WBC and platelet count had declined to a low of 1400 cells/mm³ and 92,000 cells/mm³, respectively. His ALT peaked at 128 U/L on the 9th day of hospitalization. No hemorrhagic manifestations of the infection were observed during hospitalization. A diagnosis of Sabiá infection was confirmed on acute serum by amplification of a portion of the viral genome by polymerase chain reaction and by isolation of the virus from blood. The patient recovered and was discharged on August 26.

On August 8, the virologist was apparently exposed to an aerosol of Sabiá virus when a centrifuge bottle developed a crack, and tissue culture supernatant containing the virus leaked into the high-speed centrifuge. At the time of the incident, the virologist was working alone in the biosafety level-3 laboratory (negative pressure with HEPA-filtered exhaust system). He cleaned the spilled material from the centrifuge while wearing a gown, surgical mask, and gloves.

Persons who came in contact with the patient or with his biological specimens in the hospital laboratories since onset of his illness were notified and enrolled in a surveillance program. None of these persons have had exposure to the patient that would suggest a high risk for secondary infection. As of August 31, none of the persons under surveillance have reported a febrile illness.

Reported by: M Barry, MD, F Bia, MD, M Cullen, MD, L Dembry, MD, S Fischer, MD, D Geller, MD, W Hierholzer, MD, P McPhedran, MD, P Rainey, MD, M Russi, MD, E Snyder, MD, E Wrone, MD, Yale Univ School of Medicine and Yale-New Haven Hospital; JF Gonzalez, MD, R Rico-Hesse, PhD, R Tesh, MD, R Ryder, MD, R Shope, MD, Yale Arbovirus Research Unit, Yale Univ; WP Quinn, MPH, New Haven Health Dept; PD Galbraith, DMD, ML Cartter, MD, JL Hadler, MD, State Epidemiologist, Connecticut Dept of Public Health and Addiction Svcs. A DeMaria, Jr, MD, State Epidemiologist, Massachusetts Dept of Public Health. Div of Field Epidemiology, Epidemiology Program Office; Special Pathogens Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

#### Arenavirus Infection — Continued

Editorial Note: Sabiá virus was isolated by scientists in Sáu Paulo, Brazil, in 1990 and characterized by scientists in Belém, Brazil, and at the Yale Arbovirus Research Unit (2). Only two cases of Sabiá virus infection (both in Brazil) have been reported (2). One was a naturally acquired infection in an agricultural engineer who was probably infected by exposure to an infected rodent (the natural reservoir of other known arenaviruses). The engineer died approximately 2 weeks after becoming ill. The second case was in a laboratory technician who was working with the virus. He had a severe illness characterized by 15 days of fever, chills, malaise, headache, generalized myalgia, sore throat, conjunctivitis, nausea, vomiting, diarrhea, epigastric pain, bleeding gums, and leukopenia. He recovered after hospitalization and treatment with intravenous fluids.

Little is known about the modes of transmission of the Sabiá virus. Based on the pathogenesis of other arenaviruses, the Sabiá virus is not believed to be infectious until the patient exhibits symptoms. Other arenaviruses can be transmitted by needlestick but do not readily spread from person to person. Persons in casual contact with persons with arenavirus infection are not at risk for disease and do not require medical follow-up.

#### References

- McCormick JB, King IJ, Webb PA, et al. Lassa fever: effective therapy with ribavirin. N Engl J Med 1986;314:20–6.
- Coimbra TLM, Nassar ES, Burattini MN, et al. New arenavirus isolated in Brazil. Lancet 1994;343:391–2.

#### Notice to Readers

## NIOSH Alert: Request for Assistance in Preventing Scalping and Other Severe Injuries from Farm Machinery

CDC's National Institute for Occupational Safety and Health (NIOSH) periodically issues alerts on workplace hazards that have caused death, serious injury, or illness to workers. One such alert, Request for Assistance in Preventing Scalping and Other Severe Injuries from Farm Machinery (1), was recently published and is available to the public.\*

This alert warns that farm workers are at high risk for avulsion of the scalp and other severe injuries when they work near farm machinery with inadequately guarded drivelines or shafts driven by power take-offs (PTOs). Entanglement of hair, clothing, or body parts around these drivelines or shafts kills and injures many farm workers each year: according to the NIOSH National Traumatic Occupational Fatalities Surveillance System, at least 346 farm workers aged ≥16 years died from farm-related entanglement injuries during 1980–1989; 112 of those deaths were caused by entanglement in PTO-driven drivelines and shafts of farm machinery. Approximately 10,000

<sup>\*</sup>Single copies of this document are available without charge from the Publications Office, Division of Standards Development and Technology Transfer, NIOSH, CDC, Mailstop C-13, 4676 Columbia Parkway, Cincinnati, OH 45226-1998; telephone (800) 356-4674 ([513] 533-8328 for persons outside the United States); fax (513) 533-8573.

#### Notice to Readers — Continued

nonfatal entanglement injuries also occurred on farms during 1982–1986; 864 of these injuries included the loss of a body part (1).

The alert describes five persons who were severely injured when their hair became entangled around the inadequately guarded rotating drivelines or shafts of farm machinery driven by PTOs (1,2). Recommendations are given for farm owners and workers to prevent injuries from primary and secondary drivelines and other PTO-driven shafts.

#### References

- NIOSH. Request for assistance in preventing scalping and other severe injuries from farm machinery. Cincinnati: US Department of Health and Human Services, Public Health Service, CDC, 1994; DHHS publication no. (NIOSH)94-105.
- 2. CDC. Scalping incidents involving hay balers-New York. MMWR 1992;41:489-91.

#### **Monthly Immunization Table**

To track progress toward achieving the goals of the Childhood Immunization Initiative (CII), CDC publishes monthly a tabular summary of the number of cases of all diseases preventable by routine childhood vaccination reported during the previous month and year-to-date (provisional data). In addition, the table compares provisional data with final data for the previous year and highlights the number of reported cases among children aged ≤5 years, who are the primary focus of CII. Data in the table are derived from CDC's National Notifiable Diseases Surveillance System.

### Number of reported cases of diseases preventable by routine childhood vaccination — United States, July 1994 and 1993–1994\*

	No. cases.		cases ry–July	No. cases among children aged <5 years January–July			
Disease	July 1994	1993	1994	1993	1994		
Congenital rubella							
syndrome (CRS)	0	5	2	4	2		
Diphtheria	0	0	0	0	0		
Haemophilus influenzaes	114	795	718	248	194		
Hepatitis B¶	1046	7229	6724	68	68		
Measles	71	224	794	80	178		
Mumps	119	1043	830	183	131		
Pertussis	247	2295	1810	1329	1024		
Poliomyelitis, paralytic**	1	3	1	1	1		
Rubella	28	138	199	21	18		
Tetanus	3	20	22	0	1		

<sup>\*</sup>Data for 1993 are final and for 1994, provisional.

<sup>&</sup>lt;sup>1</sup>For 1993 and 1994, age data were available for 90% or more cases, except for 1993 age data for CRS, which were available for 80% of cases.

<sup>&</sup>lt;sup>5</sup>Invasive disease; *H. influenzae* serotype is not routinely reported to the National Notifiable Diseases Surveillance System.

Because most hepatitis B virus infections among infants and children aged <5 years are asymptomatic (although likely to become chronic), acute disease surveillance does not reflect the incidence of this problem in this age group or the effectiveness of hepatitis B vaccination in infants.

<sup>\*\*</sup>One case with onset in 1994 has been confirmed; this case is vaccine-associated. In 1993, three of 10 suspected cases were confirmed; two of the confirmed cases of 1993 were vaccine-associated, and one was classified as imported.

#### Addendum: Vol. 43, No. 30

In the article "Hantavirus Pulmonary Syndrome—Northeastern United States, 1994," on page 549, the following authors should be added to the reported by section: M Hibberd, MD, M Mayer, MD, R Meyer, Suffolk County Dept of Health Svcs, Hauppauge, New York.



The Morbidity and Mortality Weekly Report (MMWR) Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 783-3238.

The data in the weekly MMWR are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Inquiries about the MMWR Series, including material to be considered for publication, should be directed to: Editor, MMWR Series, Mailstop C-08, Centers for Disease Control and Prevention, Atlanta, GA 30333; telephone (404) 332-4555.

All material in the MMWR Series is in the public domain and may be used and reprinted without special permission; citation as to source, however, is appreciated.

Director, Centers for Disease Control and Prevention David Satcher, M.D., Ph.D.

Deputy Director, Centers for Disease Control and Prevention Claire V. Broome, M.D.

Director, Epidemiology Program Office Stephen B. Thacker, M.D., M.Sc.

Editor, MMWR Series Richard A. Goodman, M.D., M.P.H. Acting Editor, MMWR (weekly) Arthur P. Liang, M.D., M.P.H. Managing Editor, MMWR (weekly)

Karen L. Foster, M.A. Writters-Editors, MMWR (weekly) David C. Johnson Patricia A. McGee Darlene D. Rumph-Person Caran R. Wilbanks

☆U.S. Government Printing Office: 1994-533-178/05025 Region IV

Official Business
Penalty for Private Use

Centers for Disease Control and Prevention (CDC)
Atlanta, Georgia 30333

Public Health Service

DEPARTMENT OF

NONES SENONES ZOHRH KHH NORES BRUNK S HHO RITAR D ME HMIC MMM NO04 ROFILMS U m w 0

000

POSTAGE & FEES PAID
POSTAGE & FEES PAID
PHS/CDC
Permit No. G-284

Redistribution using permit imprint is illegal

